

## PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant : Benjamin R. Halpern

Appl. No. : 10/087,541

Filed : March 1, 2002

For : METHODS FOR LARGE  
SCALE PROTEIN MATCHING

Examiner : Unknown

Group Art Unit 2621

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(Date)

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## PRELIMINARY AMENDMENT

United States Patent and Trademark Office	10/17/2002	SZEMDIE1	00000075	10087541
P.O. Box 2327	01	FC:1201		168
Arlington, VA 22202	02	FC:1202		180

Dear Sir:

Prior to examination, please amend the above-captioned application as follows:

**IN THE CLAIMS:**

Please add the following new claims:

16. (New) A method for comparing a query peptide to a plurality of database peptides, the method comprising:

constructing an index table comprising at least one associated mass set for each database peptide wherein the associated mass set comprises mass values for one or more fragments derived from each database peptide;

performing a search of the index table by comparing a query mass set comprising at least one fragmentation mass value for a selected peptide to the at least associated mass set for each database peptide to thereby identify similarities between the query mass set and the at least one associated mass set; and

associating the identity of the selected peptide with that of at least one database peptide based on the similarity between the query mass set and one or more of the associated mass sets.